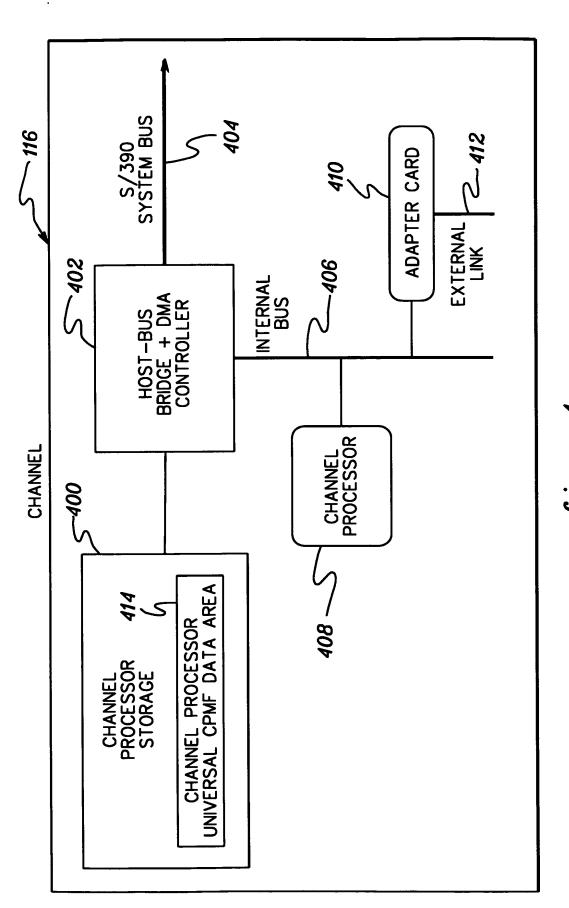


<u>112</u>

## CHANNEL SUBSYSTEM EXTENDED CPMF DATA

		_
	CHANNEL O MEASUREMENT CHARACTERISTICS	2 300
	CHANNEL O TOTAL MEASUREMENT DATA	302
	CHANNEL O MEASUREMENT DATA O/S 0	2 304
/	/ REPEATED FOR O/S 1-(M-1)	'/
	CHANNEL O MEASUREMENT DATA O/S M	
/	/ REPEATED FOR CHANNELS 1-(N-1)	//
	CHANNEL N MEASUREMENT CHARACTERISTICS	300
	CHANNEL N TOTAL MEASUREMENT DATA	2 302
	CHANNEL N MEASUREMENT DATA O/S 0	2 304
/	/ REPEATED FOR O/S 1-(M-1)	//
	CHANNEL N MEASUREMENT DATA O/S M	
		<del></del>

fig. 3



frg. 4

## CHANNEL PROCESSOR UNIVERSAL CPMF DATA

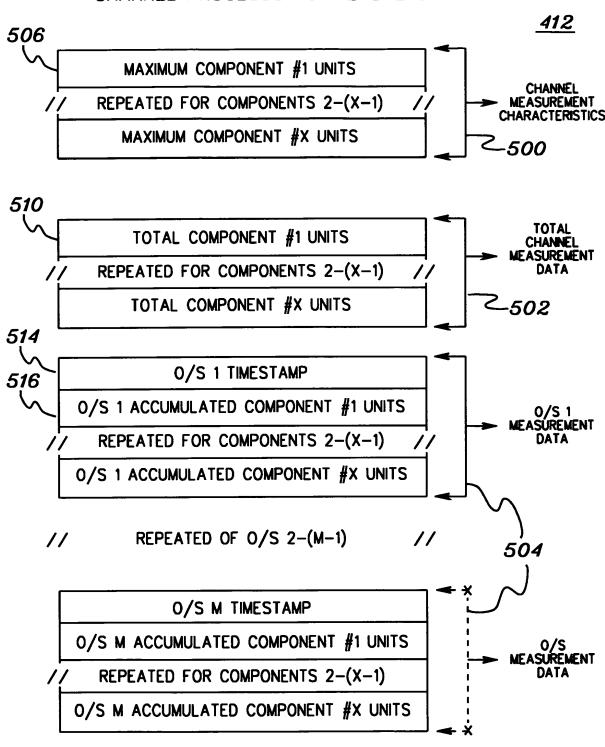
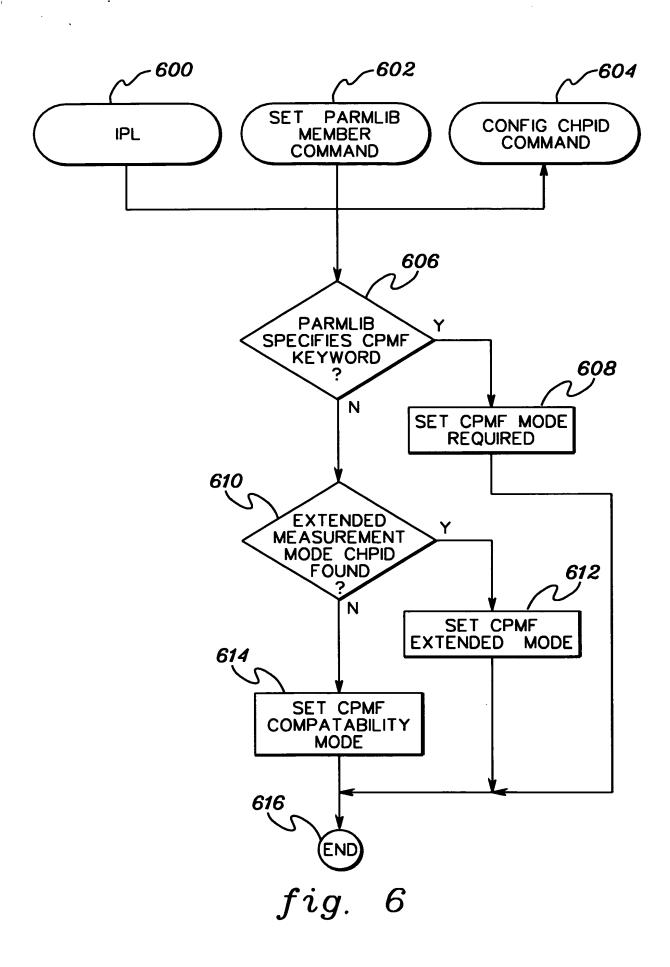


fig. 5



USING THE STORE CHANNEL MEASUREMENT CHARACTERISTICS CHSC COMMAND, THE OPERATING SYSTEMS LEARN ABOUT THE MEASUREMENT ATTRIBUTES OF EACH CHANNEL THAT IS TO BE MEASURED. - 700 -702 USING SET EXTENDED CHANNEL MEASUREMENT CHSC COMMAND, OPERATING SYSTEM STARTS CHANNEL PATH MEASUREMENT FACILITY AND PROVIDES PROGRAM DATA AREA FOR CHANNEL UTILIZATION BLOCKS TO I/O PROCESSOR 704 EACH CHANNEL PROCESSOR COLLECTS MEASUREMENT DATA FOR THE VARIOUS CHANNEL COMPONENTS CONTAINED IN THAT CHANNEL AND HOLDS DATA IN CHANNEL PROCESSOR UNIVERSAL CPMF DATA AREA CONTAINED IN CHANNEL PROCESSOR STORAGE. AT PROPER INTERVAL, COPY DATA TO CHANNEL SUBSYSTEM EXTENDED CPMF DATA AREA FOR THAT CHANNEL 706 I/O PROCESSOR COLLECTS AND REFORMATS DATA FOR ALL OF THE CHANNELS FROM EACH OF THE CHANNEL SUBSYSTEM EXTENDED CPMF DATA AREAS AND STORES IT IN THE CHANNEL UTILIZATION BLOCKS IN PROGRAM DATA AREA 708

THE OPERATING SYSTEM OBSERVES THE INFORMATION THAT HAS BEEN PLACED IN THE CHANNEL UTILIZATION BLOCKS AND IS ABLE TO INTERPRET IT USING THE MEASUREMENT ATTRIBUTES THAT APPLY TO EACH CHANNEL THAT WERE GATHERED IN STEP ONE ABOVE.

## OPERATING SYSTEM (O/S)

~~800

COLLECT CHANNEL MEASUREMENT CHARACTERISTICS DATA FOR EACH CHANNEL USING STORE CHANNEL MEASUREMENT CHARACTERISTICS CHSC COMMAND

-802

START THE CHANNEL PATH MEASUREMENT FACILITY USING THE SET EXTENDED CHANNEL MEASUREMENT CHSC COMMAND.

-804

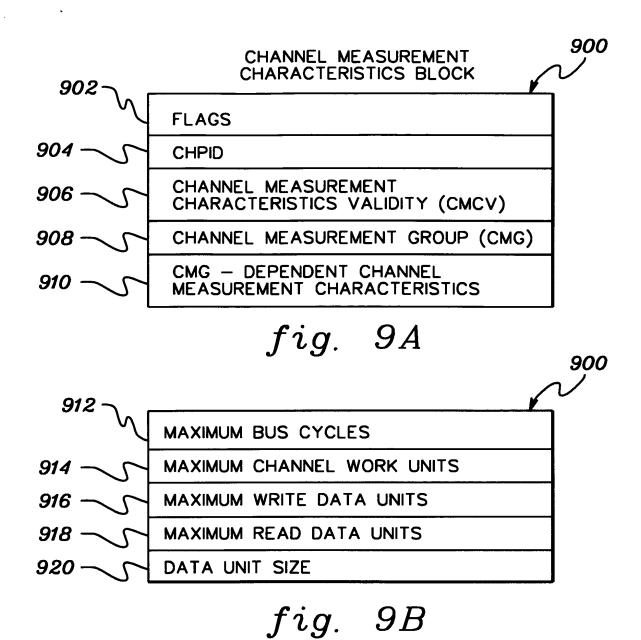
THE CHANNEL SUBSYSTEM BEGINS TO STORE CHANNEL MEASUREMENT DATA INTO THE O/S's CHANNEL UTILIZATION BLOCK (CUB) IN STORAGE EVERY 4 SECONDS.

806

TO DETERMINE THE UTILIZATION OF CHANNEL COMPONENT X, THE O/S DOES THE FOLLOWING:

~~808

- 1) SAVE A COPY OF THE CUB CALLED SAMPLE #1, DELAY FOR A WHILE, AND THEN SAVE ANOTHER COPY OF THE CUB CALLED SAMPLE #2.
- 2) CALCULATE THE "CHANGE IN CHANNEL COMPONENT X UNITS" BETWEEN THE SAMPLE PERIODS BY SUBTRACTING COUNT OF CHANNEL COMPONENT X UNITS FOR SAMPLE #1 FROM COUNT OF CHANNEL COMPONENT X UNITS FROM SAMPLE #2.
- 3) CALCULATE THE "CHANGE IN CHANNEL TIME" BETWEEN THE SAMPLE PERIODS BY SUBTRACTING THE CHANNEL TIMESTAMP FOR SAMPLE #1 FROM THE CHANNEL TIME—STAMP FOR SAMPLE #2.
- 4) CALCULATE THE "AVERAGE CHANGE IN CHANNEL COMPONENT X UNITS PER SECOND" DURING THE SAMPLE PERIOD BY DIVIDING THE "CHANGE IN CHANNEL COMPONENT X UNITS" BY THE "CHANGE IN CHANNEL TIME".
- 5) CALCULATE THE UTILIZATION OF CHANNEL COMPONENT X DURING THE SAMPLE PERIOD BY DIVIDING THE "AVERAGE CHANGE IN CHANNEL COMPONENT X UNITS PER SECOND" BY THE MAXIMUM CHANNEL COMPONENT UNITS PER SECOND FROM THE CHANNEL MEASUREMENT CHARACTERISTICS.



COMMAND REQUEST BLOCK FOR TIME

SET EXTENDED CHANNEL MEASUREMEMENTS COMMAND

1002	OPERATION CODE	1000
1004	KEY	
	CHANNEL UTILIZATION BLOCK ADDRESSES	

fig. 10

